

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-23. (canceled)
24. (new) A method of manufacturing a tissue matrix comprising seeding stem cells from a mammalian placenta into or onto a tissue matrix.
25. (new) The method of claim 24, wherein said tissue matrix is an artificial tissue matrix.
26. (new) The method of claim 24, wherein said tissue matrix is a tissue matrix produced from natural tissue.
27. (new) The method of claim 26, wherein said natural tissue matrix is a decellularized tissue.
28. (new) The method of claim 27, wherein said tissue is an organ or part of an organ.
29. (new) The method of claim 24, wherein said stem cells are SSEA3<sup>-</sup>, SSEA4<sup>-</sup>, Oct-4<sup>+</sup> and ABC-p<sup>+</sup>.
30. (new) The method of claim 29, wherein said stem cells are CD10<sup>+</sup>, CD29<sup>+</sup>, CD34<sup>-</sup>, CD44<sup>+</sup>, CD45<sup>-</sup>, CD54<sup>+</sup>, CD90<sup>+</sup>, SH2<sup>+</sup>, SH3<sup>+</sup>, or SH4<sup>+</sup>, or any combination of the foregoing.
31. (new) The method of claim 24, wherein said stem cells are CD34<sup>+</sup>.
32. (new) The method of claim 24, wherein said stem cells are obtained from a placenta has been perfused for at least 2 hours.
33. (new) The method of claim 24, wherein said stem cells are obtained from a placenta has been perfused for at least 12 hours.
34. (new) The method of claim 24, wherein said stem cells are obtained from a placenta has been perfused for at least 24 hours.
35. (new) The method of claim 27, wherein said decellularized tissue is contacted with serum and fibronectin prior to said seeding.
36. (new) The method of claim 35, wherein said decellularized tissue is additionally contacted with a glycosaminoglycan prior to said seeding.
37. (new) The method of claim 36, wherein said glycosaminoglycan is heparin.
38. (new) The method of claim 37, wherein said fibronectin and said heparin are present in a ratio of from about 0.1:1 to about 10:0.1 fibronectin:heparin.

39. (new) The method of claim 24, wherein said stem cells are seeded by injection into said tissue.

40. (new) The method of claim 24, wherein said stem cells are seeded through the tissue's vasculature.

41. (new) A tissue matrix made according to the method of claim 25.

42. (new) A tissue matrix made according to the method of claim 27.

43. (new) A tissue matrix made according to the method of claim 38.